

CLAIMS

What is claimed is:

- 1 1. A processor comprising:
 - 2 a first port to receive a supply voltage from an external voltage regulator,
 - 3 the supply voltage to power the processor;
 - 4 a voltage sensor to monitor the supply voltage; and
 - 5 a second port to provide a control signal from the voltage sensor to the
 - 6 voltage regulator to indicate if the supply voltage is above or below a
 - 7 target value.
- 1 2. The processor of claim 1, wherein the target value is adjustable by the
- 2 processor in accordance with a power management policy.
- 1 3. The processor of claim 1, wherein the target value is to be set to allow the
- 2 processor to meet a timing requirement.
- 1 4. The processor of claim 1, wherein the target value is to be reduced if the
- 2 circuit is inactive.
- 1 5. The processor of claim 1, wherein the voltage sensor includes an op amp.
- 1 6. The processor of claim 1, wherein the circuit includes at least a portion of a
- 2 core of the processor.

- 1 7. The processor of claim 1, wherein the circuit includes a memory region.
- 1 8. The processor of claim 7, wherein the memory region is a cache.
- 1 9. A computer system comprising:
2 a discrete voltage regulator to provide a supply voltage; and
3 a processor, powered by the supply voltage, to provide a control signal to
4 the voltage regulator to indicate a target value for the supply voltage.
- 1 10. The computer system of claim 9, wherein the target value is to be adjusted by
2 the processor in accordance with a power management policy.
- 1 11. The computer system of claim 9, wherein the target value is to be set to allow
2 the processor to meet a timing requirement.
- 1 12. The computer system of claim 9, wherein the target value is to be reduced if
2 at least a portion of the processor is inactive.
- 1 13. The computer system of claim 9, wherein the target value is to be indicated
2 by the control signal by indicating if the supply voltage is above or below the
3 target value.

1 14. The computer system of claim 9, wherein the processor includes a voltage
2 sensor to monitor the supply voltage and to provide the control signal, the
3 voltage sensor including an op amp.

1 15. A method comprising:
2 enabling a voltage regulator to provide Vcc to a processor;
3 enabling the processor to receive Vcc from the voltage regulator and to
4 send a control signal associated with Vcc to the voltage regulator, the
5 control signal to indicate a target value; and
6 enabling the voltage regulator to receive the control signal from the
7 processor, the voltage regulator to adjust Vcc to the target value in
8 response to the control signal.

1 16. The method of claim 15, wherein enabling the voltage regulator to provide
2 Vcc to the processor includes electrically coupling a Vcc output of the voltage
3 regulator to a Vcc input of the processor.

1 17. The method of claim 15, wherein enabling the voltage regulator to receive the
2 control signal from the processor includes electrically coupling a Vcc control
3 output of the processor to a Vcc control input of the voltage regulator.

1 18. The method of claim 15, further comprising reducing the target value if at
2 least a portion of the processor is inactive.